Establishment and Maintenance of an E-learning Campus for the Needs of the Bachelor Programme "Visual Communication and Graphic design"

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Abstract
The main purpose of this research is to establish and develop an e-learning campus for the needs of the undergraduate education programme of Visual Communication and Graphic design, successfully conducted at Hochschule für Medien, Kommunikation und Wirtschaft /HMKW/, Campus Berlin.
It aims also to investigate the content of the courses and the teaching methodology in face-to-face classes, by careful consideration of the pedagogical approaches used. Regarding the complexity of teaching courses in the field of visual arts and design through an online environment, this research aims to outline certain practical recommendations for preparing educators, administrators and students to teach, administrate and learn online respectively. Some of the recommendations offer advice to lecturers and students who may be relatively new to e-learning education.
The project was funded by the German Academic Exchange Service (DAAD) scholarship programme "Study Visits for Academics - Artists and Architects, 2016", and hosted by Hochschule für Medien, Kommunikation und Wirtschaft /HMKW/.

Key words: e-learning, online learning, face-to-face learning, visual communications, visual arts, graphic design, course management system, higher education, German Academic Exchange Service (DAAD), Moodle, E-HMKW;

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Introduction

The major goal of this research is to build an online learning campus for the Bachelor programme of Graphic Design and Visual Communication and therefore to establish precisely the quality standards for the online courses in the programme. The result of this research will be a professionally designed e-learning online campus named: E-HMKW.

All of the methods used are based on the requirements for Bachelor degree accreditation of the German Higher Education System.

This research involves the provision of a high-quality online education campus for students who start their Higher education at HMKW and for those who have graduated colleges or other higher schools.

The final goal of the project was accomplished by completing the following steps (Fig 1):

Fig 1. Project management

Analyses

B.A. Graphic Design and Visual Communication is an education program which is framed with its own distinct characteristics for teaching and learning. All courses of the programmes require specific approaches and methodologies of teaching. (Raff J., 2016). There is an increasing role for educators to prepare visually educated learners through keeping the right balance between theory and practice. (Raff J., 2012)

Modern culture is dependent on visually appealing materials. Students need to have the ability to communicate universally and instantly. Whilst culture is constantly enriched through the visual language, including social networks; the web; photos; video and motion graphics, more institutions are re-evaluating their curricula to include visual literacy requirements. One of the essential pedagogical issues is to promote intellectual diversity. (Moore L. Joy, Deane C., Galyen K., 2011).

According to Dr. Dorothea Rüland, the Secretary General of the German Academic Exchange Service (DAAD): Internationalization and digitization are cross-sectoral issues – that was made very clear by the work of the expert group. (Göbel J., 2016).

Internationalization could be facilitated by displaying information in a variety of web-based formats and using a relevant approach to measure the aptitude in a variety of contexts. It is known that the students who enrol in graphic design possess different learning abilities and software skills, consequently the professors who run online courses should make a strident effort to present class materials in a variety of suitable formats. (Raff J., 2016)

The specifics of the visual communication and design matter make the e-learning teaching manner significantly distinguishable from the most popular and established online education formats. In all of the online-based courses, it is strongly advisable to create lectures, articles,

visual learning organised notes which consist of graphic elements, and to present aesthetically all of the prepared learning materials. (Pineas M., Cini M., 2011)
The project also aims to define the framework of the teaching online presence. These roles involve the assistance and guidance of cognitive and social processes for the realization of personally meaningful and educationally worthwhile learning outcomes. Overall, the educators use two main approaches in order to instigate a web-based discussion, as the following table shows. (Knolmayer G, 2002).

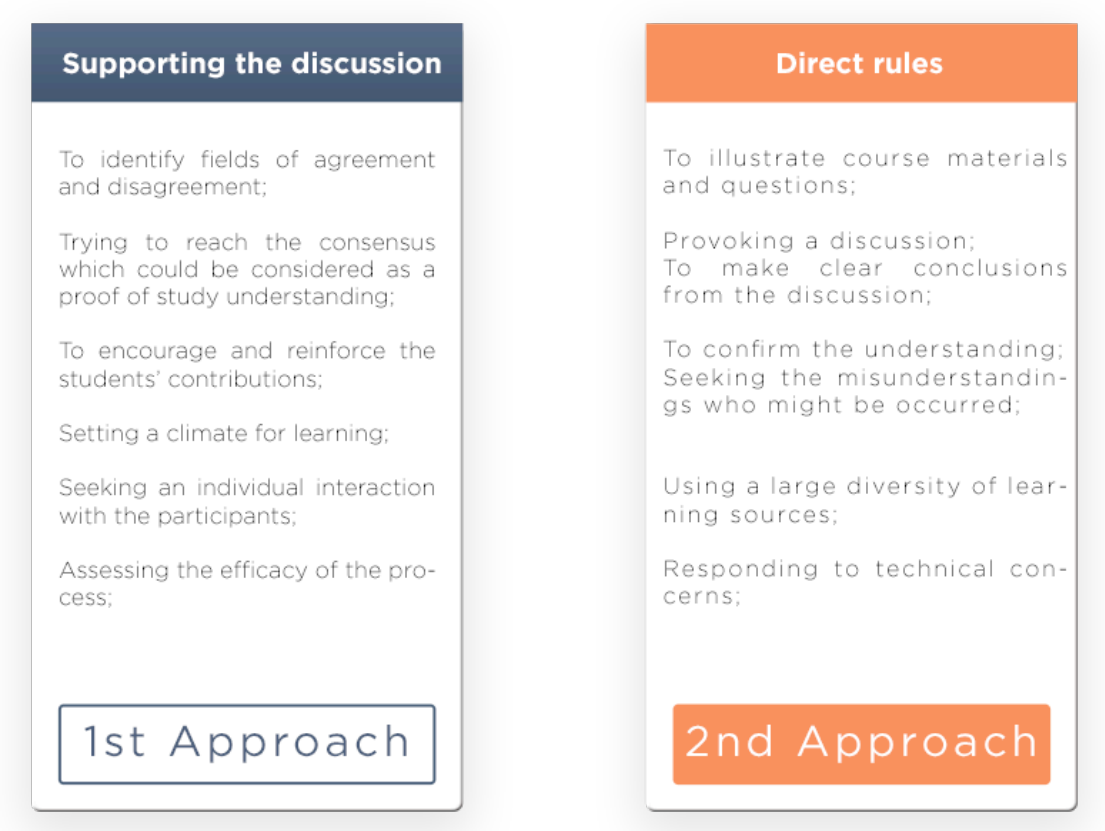

Fig.2. Approaches for instigating a web-based discussion

The professors-students framework interaction will be based on both approaches.
The project's framework of hypothesis is based on the Checklist of Online Interactive Learning criteria (COIL), described by Thomas Tobin (Tobin J, 2004). All of the explained criteria in the table below comprise project aims and goals.

Category 1: Student Behaviors Meet the Online Course Standards
E-HMKW will be a multinational and cross-cultural oriented project, which will invite students from all over the world. It is advisable, especially at the beginning of their

education to give them a chance to demonstrate their necessary technology skills, which will reveal if they are adequate to use the course management system. The students will be encouraged to seek opportunities to interact with instructors and their co-students.
To participate actively in all e-learning activities and to be actively involved through discussion and interaction in the online campus.
To use a wide range of communication tools to improve the online learning quality standards. To personalize the course management system by publishing and regularly updating the professors' biographies.

Category 2: Professor-Student Interactions
To provide students with clear and appropriate guidance. To use specifically predefined actions to regularly check the online leaning quality of the programme.
To personalize the online course communications through student-educator and student-student interactions. To implement a variety of interaction techniques in order to provide sympathetic and individual approaches, which involves the establishment of the e-learning campus, conducting a live group conversation et al.
To seek to blur the distinction between face-to-face and e-learning approaches of interaction. At the start of the course, to clearly define the institutional guidance which prevents cheating and plagiarism.
To maintain a separate e-mail box for each of the conducted web courses. To provide with a link to the frequently asked questions (FAQ's) to all of the participants in order to reduce duplication.
To develop attractive online learning materials.
To closely monitor each student's progress. To create opportunities to coach and facilitate student construction of knowledge.

Category 3: Technology Aid
To decrease the technological difficulties in accessing the online campus and internal interaction. To provide the faculty staff with a clear and continuous technical support.

Category 4: E-learning Scene

To use regular assessment activities to provide an effectual framework for the e-learning space. To define a normal size of the classes for all of the online conducted courses. Therefore, the faculty will obtain the appropriate time in order to deliver quality online lectures.
To provide the learners with flexible deadlines to motivate them, to maintain interaction and to give quick feedback for any technical problems. In order to facilitate high achievements, it is advisable to create a social interaction through class collaboration.
The courses will have their own hierarchical structures comprising sequences of learning materials.
The technical establishment of course management system involves a Moodle-based platform. This campus, specially designed for the needs of the visual communication and design will provide students with hospitality and safe virtual classrooms.
To provide the students with an opportunity to discuss the ongoing obstacles in an open and honest dialogue. To conduct a closed-seminar session of the course in which you will determine the main difficulties and problems the learners met during the course.
In order to develop the critical thinking skills, regular live-stream conferences are advisable.

Methodology

Two internal workshops were held in order to discuss the challenges the online education will present, especially in the visual-arts-oriented programmes. The sessions were joined by the HMKW's board of directors, educators, students and administration.

One survey was conducted during these sessions. The survey respondents were representatives of all of the workshops participants.

The survey encompassed open-ended and closed questions focused on defining the main characteristics of the E-HMKW, successfully integrated into the Bachelor programme of Graphic Design and Visual Communication. (Moore, Deane & Galyen 2011). The questions are focused on all of the learning characteristics of the visual communication and graphic design education. These questions are designed in order to derive valuable information about the type of online environment where the participation was involved.

Questionnaire

1. Is there anything you would like to see changed in E-HMKW?
2. How do you find the course management system's interface?
3. How would you estimate your user experience?
4. Are the directions and expectations for the interaction clear?
5. Does the course-management-system-based structure of the course - the topics and the requirements - make sense for you?
6. Are the course expectations and assignments clear?
7. How intellectually stimulating are the selected resources?
8. What course communication tools do you check or use every day or almost every day?
9. How often do you use E-HMKW?
10. Has E-HMKW helped you to improve your positive learning outcomes?

Data Collection

Two workshops were held in the HMKW's campus. Data collection involves separating the respondents into a few focus-groups. Each of them is comprised of a maximum of seven respondents. The selected approach insisted the participants to be asked about their opinions and attitudes, regarding the selected study cases. Each of the workshops was designed to provoke discussions by simulating a virtual e-learning environment.

Data Analyses

The data of the survey were imported into MS Excel. Questions are analysed using qualitative methods.

Resulting from the analysed data, a course management system was designed according to the needs of the respondents. According to Marie Cini and Matthew Prineas, the course management system is a virtual environment that allows professors and students to interact over the course of the semester. (Cini and Prineas 2011). It is an equivalent definition of the well-known term 'online campus'. This virtual classroom space is adapted accordingly in order to obtain maximum returns to all of the participants.

Teaching graphic design courses conducted through the online virtual environment requires focusing on the several benchmarks, which were derived by investigation of the participations' behaviors within the online education environment. (Poon J., 2013). These benchmarks are essential in order to assess the effectiveness of the education process quality.

In order to establish a set of quality standards of the e-learning programme, this research defined precisely a useful calibration approach. This project revised two main components:

1. E-learning Teaching Benchmarks
   - ✓ The interaction between students and faculties is an essential point and is going to be facilitated in a variety of ways, including conversation and e-mails.
   - ✓ Providing constructive feedback on the students' assignments in a timely manner.
   - ✓ To instruct the students in the proper method in order to facilitate the variety of uploaded learning resources.
2. Course Management Benchmarks
   - ✓ Instructional materials are updated in a timely manner to ensure that they match programme quality standards.
   - ✓ Courses are designed to encourage students in discussions, brainstorming sessions, and homework submissions as an integral part of their course and programme requirements.

Time management of the research activities

The research was completed in a period of 2 months. It started on 01.10.2016 and ended on 30.11.2016. The workflow included three phases:

Workflow	Activities	Time duration
Phase 1 Project definition and planning	Start of the research. Investigating the course contents, students' needs and teaching methods. Conducting a survey through the first workshop session. Data collection and analyses.	01.10.2016 – 14.10.2016
Phase 2 Project execution and performance	Development of the course management system. Conducting the second workshop session and a survey, narrowly focused on the e-learning principles which are at the base of the forthcoming online campus.	17.10.2016 – 22.11.2016
Phase 3 Project close	Project completion. Introducing the online campus and the pre-defined standards of e-learning quality.	23.11.2016 – 30.11.2016

Findings and Project Implications

Phase 1. Project definition and planning

The first step prior to project launch was to make the necessary preparations for the students to use the online resources. E-HMKW was designed with a potential to attract students from all over the world. Some of them were new to the e-learning and may found this kind of education disorienting without the face-to-face classroom space and guidance from the teacher, physically present in class. In addition, some students misunderstood the online learning as a "more informal" learning format when compared to the traditional physical classroom education activity.

During this phase, a workshop was held. It aimed to identify, in detail the needs of the programme and its specific characteristics. There are a number of issues that were taken into consideration during this first stage of the project. Most of them are rudimentary and designed to support students' involvement for online course(s):

- ✓ Elucidating the required computer skills and terminology;
- ✓ Providing the students and administration with a guideline that precisely defines the required technological demands needed for the course;

Phase 2. Project execution and performance

This project's stage included the establishment of the Moodle-based course management system, E-HMKW as well as conducting the second workshop session and a related survey, narrowly focused on the e-learning principles that populated the defined course management system. Guided by HMKW's highly-experienced faculties, the data gained by the conducted survey were carefully analyzed.

The recently done survey among the undergraduate students in the Bachelor programme "Visual Communication and Graphic Design" categorized their first learning experience with the course management platform, E-HMKW as very positive:

Q4: How would you rate the quality of your online-based learning experience?

- Below Average – 0%
- Average – 4%
- Above Average – 18%
- Excellent – 78%
- Other /Explain – 0%

Q9: Does E-HMKW help you to improve your positive outcomes?

- Yes – 73%
- Neutral – 27%
- No – 0%

Q10: Would you enjoy using E-HMKW for the rest of your courses?

- Yes – 100%
- No – 0%

Once the campus structure was designed, the researcher provided the students with a detailed worksheet. It consisted of instructions on how to complete the technical tasks required for completing course work, some examples of information to provide include:

- ✓ Where to find the course learning materials;
- ✓ How to communicate with one another using the online campus and upload their homework assignments;
- ✓ How to access course calendars, chats, forums, and post personal messages;
- ✓ Show the students how to seek technical support and how to quickly fix the occurred problems;
- ✓ Explain online conventions of abbreviations that define the tone of interaction;

The programme courses have started to be delivered in a specially designed campus, based on the Moodle open-source platform. It was designed according to the needs of providing a high-quality education service, adhering firmly to the HMKW's brand guidance. The campus was designed in order to unify all HMKW's brand tools, such as logos, color palette, typeface et al. Due to the limited research time, a Beta version was released.

The courses content is predicted to be constantly developed and it includes several features, which will be successfully managed during the lectures:

- ✓ Live Virtual Classroom in all of the classes;
- ✓ Live-Streaming videos of real lessons;
- ✓ Videos of real lessons;

All of these features are developed through regular consideration and careful analyses of the students' needs. The issues of the online-based graphic design learning development include:

- ✓ Adapting the existing learning resources for the needs of e-learning;
- ✓ Creating a visually attractive course content which can be regularly updated;
- ✓ Students involvement;
- ✓ Enrolment and a learner authentication approach which are simple and secure;
- ✓ An intuitive online environment which facilitates the teacher management features;

At the same time, the online campus enables to run live virtual classrooms, which gives a chance for providing appropriately responsive feedback, live presentation and consideration. The types of live conversation could branch out into a live call and text chat.
At the end of the second phase, a standard of online quality guidance was created. It was based on the suggestions, provided by Judith Boettcher and Rita-Marie Conrad at "*The online teaching survival guide: simple and practical pedagogical tip"*.

Related Issues	
Professors	How often and for how long should I log in at E-HMKW? What E-HMKW digital tools are appropriate for my class? How to provoke an engaging discussion?
Students	In what time the lecturers should provide me with their feedback? May I use E-HMKW for uploading my assignments instead of presenting them into my face-to-face class?

The guidance consists of certain recommendation for conducting e-learning sessions (Boettcher, Judith 2010):

Stage 1 - Preparation

Interactions	**Scheduled activities over the time**	**Teaching offline presence in E-HMKW**	**Online session**
Professor-	Faculties will be asked to briefly present	5 hours	-

Students	themselves online, before the first face-to-face session, which includes not only sharing their professional and research expertise, but also their hobbies and interests. The students have to be assured with their course access and login, announce them with the main learning outcomes. A clear guideline is necessary to be drawn of what is expected from the students and what they should expect from the lecturer, which ensures the students' course satisfaction.	per week in a regular rhythm.
Students - Students	Encourage the students' social interaction. Achieve social interaction and learning community building where the students start to know each other personally.	
Students - Professor	Students will be encouraged to briefly explain their personal aims and goals, their general expectations and intents.	

Professors – Students Interaction via E-HMKW (a Moodle-based course management system).

Stage 2 – Introduction

Interactions	**Scheduled activities over the time**	**Teaching presence in E-HMKW**	**Online session**
Professor-Students	Initial cognitive posting is required. The faculties are expected to create a forum, to fix their upcoming assignments in the	5 hours per week in a	The online sessions' length should be no

	Moodle's calendar. Schedule the first online session (it is advisable to conduct it during the second semester week).	regular rhythm.	longer than 60 min. Inviting a guest lecturer should be considered as an asset. It is recommendable to cast light upon some upcoming course topics. All faculties are suggested to set the tone of engaging in an informal online interaction.
Students - Students	In this part, the faculties have to encourage the students' collaborative experience by asking the students to work on their projects in pairs or small groups by using E-HMKW, where the lecturers could easily track the student's progress and activities.		
Students - Professor	Students are expected to submit their assignments in E-HMKW, to upload content and regularly give their comments.		

Stage 3 – Active Communication

Interactions	**Scheduled activities over the time**	**Teaching presence in**	**Online session**

		Moodle	
Professor-Students	Strong teaching presence – provoke online-based discussions, guide the students through the course content, and ask them to come back with a feedback in a timely fashion.	2 hours per week in a regular rhythm.	The sessions' length should be no longer than 45 min. Lecturers have to focus on the current students' needs and problems.
Students - Students	Students are encouraged to share their face-to-face experience in E-HMKW, raise online-based questions in the forum and leave some comments.		
Students - Professor	Students explore and engage more content resources, having opportunities to share it with their professor. Students would be able to provide the professor with their feedback earlier and more consistently throughout their course experience.		

Stage 4 – End of the Course

Interaction	**Scheduled activities over the time**	**Teaching presence in Moodle**	**Online session**
Professor-Students	The faculties are encouraged to support learners' projects and the course community development. The students have to be provided with the faculty's feedback based on their assignments in advance	5 hours per week in a regular rhythm.	Close session The class length should be no longer than 45 min. It is advisable to conduct it 2 weeks

	by posting brief comments in E-HMKW course management system.	before the course end. Lecturers are encouraged to explore in detail the students' end-of-course experience.
Students - Students	Share skills, participate actively in the forum and get the most out of their course interaction. The students actively support their fellows with tips and hints.	
Students - Professor	Complete their final assignments. It is advisable, students to be aware in advance with their lecturer's feedback.	

This convention aims to improve the quality of the programme and to guarantee the students' satisfaction. Another goal was to define a systematic manner of online teaching concerning the specifics of the selected science area – visual communication and graphic design.

Phase 3. Project close.

This phase marked the project completion. It involves the official Beta release of the online campus and the defined e-learning quality standards.

Conclusion

This project managed to ensure a high-quality online education based on the requirements of the German Education System.

Starting an E-HMKW for the programme of Graphic Design and Visual Communication was the first step of the global projects. All of the explained principles in this study were designed to support the potential development of this global online campus.

In general, the course management system (Moodle-based) is successfully designed in a way to meet the students and professors' needs: a user-friendly interface, integrated drag/drop options, opportunities for synchronous and asynchronous interactions, ready to keep students

staying on track with their assignments. This course management system aims to serve as a habit-forming product by engaging the students with its professional content.

However, the project has certain limitations – all findings and results will be applicable for similar undergraduate programmes and programmes in other areas may not be able to adopt the same findings and model for establishing a course management system.

The online education, which is focused on the area of visual arts, has it is own characteristics and specifics of teaching manners. Therefore, all of the program needs and requirements were carefully investigated during the project's implementation.

This narrowly focused e-learning system allowed the HMKW's students to obtain a diversity of knowledge and skills.

The successful project completion supported students' education by covering the highest standard of the German Education System.

References

Boettcher, Judith V.,(2010) *The online teaching survival guide: simple and practical pedagogical tip.* /Judith V. Boettcher, Rita-Marie Conrad. BP Printing, First Edition, ISBN 978-0-470-42353-0, U.S.A.

Ghirardini B (2011), *E-learning methodologies - A guide for designing and developing e-learning courses,* Published by: Food and Agriculture Organization of the United Nations, supported by: Federal Ministry of Food, Agriculture and Consumer Protection. ISBN 978-92-5-107097-0

Göbel J., Valuable Opportunities, *Letter, Magazin für DAAD-Alumni*, p.27, 2016/03

Raff J & Melles G (2012) *Design without designers: thinking everyday design practice*, Design Philosophy Papers (1).

Raff J., (2016) *Design Research – just do it?* Wissenschaft in der Design-Bachelorarbeit, DGTF Jahrestagung 2016 "Reflecting Research"

Knolmayer G, (2002). *Decision Support Models for Composing and Navigating through e-Learning Objects*, University of Bern, Institute of Information Systems, Proceedings of the 36th Hawaii International Conference on System Sciences (HICSS'03), 0-7695-1874-5/03, © 2002 IEEE

Moore L. Joy, Deane C., Galyen K., (2011). *E-learning, online learning, and distance learning environments: Are they the same?* The Internet and Higher Education 14, p.131-132. Published on 2011, last accessed on 21.09.2015. https://scholar.vt.edu/access/content/group/5deb92b5-10f3-49db-adeb-7294847f1ebc/e-Learning%20Scott%20Midkiff.pdf

Pineas M., Cini M., (2011). *Assessing Learning in Online Education: The Role of Technology in Improving Student Outcomes.* National Institute for Learning Outcomes Assessment Journal, published on October 2011, last accessed on 12.09.2015. http://www.learningoutcomeassessment.org/documents/onlineed.pdf

Poon J., (2013), *Blended Learning: An Institutional Approach for Enhancing Students' Learning Experiences*. Deakin University, MERLOT Journal of Online Learning and Teaching, Vol. 9, No. 2, June 2013

Seufert, S (2002). E-Learning Business Models Framework and Best Practice Examples, University of St. Gallen, Switzerland, DOI: 10.4018/978-1-930708-27-3.ch004

Thomas J. Tobin., (2004). *Best Practices for Administrative Evaluation of Online Faculty*, Online Journal of Distance Learning Administration. Volume 7, No 2., online published: http://www.westga.edu/~distance/ojdla/summer72/tobin72.html
Last accessed on 07.09.2015.

Images

Fig 1. Project management.:
Design: Petyo Budakov
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Fig.2. Approaches for investigating a web-based discussion
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